

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (withdrawn) An isolated polypeptide of at least 15 amino acid residues comprising an epitope-bearing portion of a protein of SEQ ID NO:2.

2. (withdrawn) The polypeptide of claim 1 wherein said polypeptide comprises a segment that is at least 70% identical to a sequence selected from the group consisting of:

(a) residues 52-179 of SEQ ID NO:2; and

(b) residues 258-370 of SEQ ID NO:2.

3. (withdrawn) The isolated polypeptide according to claim 1 wherein said polypeptide is selected from the group consisting of:

residues 19-179 of SEQ ID NO:2;

residues 52-179 of SEQ ID NO:2;

residues 19-253 of SEQ ID NO:2;

residues 52-253 of SEQ ID NO:2;

residues 19-255 of SEQ ID NO:2;

residues 52-255 of SEQ ID NO:2;

residues 19-257 of SEQ ID NO:2;

residues 52-257 of SEQ ID NO:2;

residues 19-253 of SEQ ID NO:2;

residues 52-253 of SEQ ID NO:2;

residues 19-370 of SEQ ID NO:2;

residues 52-370 of SEQ ID NO:2;

residues 180-370 of SEQ ID NO:2; and

residues 258-370 of SEQ ID NO:2.

4. (withdrawn) An isolated polypeptide comprising a sequence of amino acids of the formula  $R1_x-R2_y-R3_z$ , wherein:

R1 is a polypeptide of from 100 to 130 residues in length, is at least 70% identical to residues 52-179 of SEQ ID NO:2, and comprises a sequence motif C[KR]Y[DNE][WYF]X{11,15}G[KR][WYF]C (SEQ ID NO:4) corresponding to residues 109-131 of SEQ ID NO:2;

R2 is a polypeptide at least 90% identical to residues 180-257 of SEQ ID NO:2;

R3 is a polypeptide at least 70% identical in amino acid sequence to residues 258-370 of SEQ ID NO:2 and comprises cysteine residues at positions corresponding to residues 272, 302, 306, 318, 360, and 362 of SEQ ID NO:2; a glycine residue at a position corresponding to residue 304 of SEQ ID NO:2; and a sequence motif CX{18,33}CXGXCX{6,33}CX{20,50}CXC (SEQ ID NO:3) corresponding to residues 272-362 of SEQ ID NO:2; and

each of x, y, and z is individually 0 or 1, subject to the limitations that:

at least one of x and z is 1; and

if x and z are each 1, then y is 1.

5. (withdrawn) The isolated polypeptide of claim 4 wherein x=1.
6. (withdrawn) The isolated polypeptide of claim 5 wherein R1 is at least 90% identical to residues 52-179 of SEQ ID NO:2.
7. (withdrawn) The isolated polypeptide of claim 5 wherein R1 comprises residues 52-179 of SEQ ID NO:2.
8. (withdrawn) The isolated polypeptide of claim 5 wherein R1 is at least 90% identical to residues 19-179 of SEQ ID NO:2.
9. (withdrawn) The isolated polypeptide of claim 5 wherein y=1.
10. (withdrawn) The isolated polypeptide of claim 9 wherein z=1.
11. (withdrawn) The isolated polypeptide of claim 10 wherein R3 is at least 90% identical to residues 258-370 of SEQ ID NO:2.
12. (withdrawn) The isolated polypeptide of claim 4 wherein said polypeptide comprises residues 52-253 of SEQ ID NO:2, residues 180-370 of SEQ ID NO:2, or residues 52-370 of SEQ ID NO:2.
13. (withdrawn) The isolated polypeptide of claim 4 wherein z=1.
14. (withdrawn) The isolated polypeptide of claim 13 wherein R3 is at least 90% identical to residues 258-370 of SEQ ID NO:2.

15. (withdrawn) The isolated polypeptide of claim 13 wherein R3 comprises residues 258-370 of SEQ ID NO:2.

16. (withdrawn) The isolated polypeptide of claim 13 wherein y=1.

17. (withdrawn) The isolated polypeptide of claim 16 wherein x=1 and R1 is at least 90% identical to residues 52-179 of SEQ ID NO:2.

18. (withdrawn) The isolated polypeptide of claim 17 wherein R3 is at least 90% identical to residues 258-370 of SEQ ID NO:2.

19. (withdrawn) The isolated polypeptide of claim 13, further comprising cysteine residues at positions corresponding to residues 308 and 316 of SEQ ID NO:2.

20. (withdrawn) The isolated polypeptide of claim 4, further comprising an affinity tag.

21. (withdrawn) The isolated polypeptide of claim 4, further comprising an immunoglobulin constant domain.

22-31. (canceled)

32. (currently amended) An isolated polynucleotide ~~of up to approximately 4.4 kb in length~~, wherein said polynucleotide encodes a polypeptide which is from 113 to 138 amino acid residues in length and comprises amino acid residues 258-370 of SEQ ID NO:2, comprising a sequence of amino acids of the formula R1<sub>x</sub>R2<sub>y</sub>R3<sub>z</sub>, wherein:

R1 is a polypeptide of from 100 to 130 residues in length, is at least 70% identical to residues 52-179 of SEQ ID NO:2, and comprises a sequence motif ~~C[KR]Y[DNE][WYF]X{11,15}G[KR][WYF]C (SEQ ID NO:4) corresponding to residues 109-131 of SEQ ID NO:2;~~

R2 is a polypeptide at least 90% identical to residues 180-257 of SEQ ID NO:2;

R3 is a polypeptide at least 70% identical in amino acid sequence to residues 258-370 of SEQ ID NO:2 and comprises cysteine residues at positions corresponding to residues 272, 302, 306, 318, 360, and 362 of SEQ ID NO:2; a glycine

~~residue at a position corresponding to residue 304 of SEQ ID NO:2; and a sequence motif CX{25,33}CXGXCX{10,33}CX{20,50}CXC (SEQ ID NO:3) corresponding to residues 272-362 of SEQ ID NO:2; and~~

~~each of x, y, and z is individually 0 or 1, subject to the limitations that:  
at least one of x and z is 1; and  
if x and z are each 1, then y is 1.~~

33. (original) The polynucleotide of claim 32, wherein said polynucleotide is DNA.

34. (currently amended) The polynucleotide of claim 33 comprising nucleotides ~~+~~ 772 through 1110 of SEQ ID NO:6.

35. (currently amended) The polynucleotide of claim 33 comprising nucleotides ~~226 through 1335 of SEQ ID NO:1~~ 748 through 1110 of SEQ ID NO:6.

36. (original) An expression vector comprising the following operably linked elements:

a transcription promoter;  
a DNA polynucleotide according to claim 32; and  
a transcription terminator.

37. (original) The expression vector of claim 36, further comprising a secretory signal sequence operably linked to the DNA polynucleotide.

38. (original) A cultured cell into which has been introduced an expression vector according to claim 36, wherein said cell expresses the polypeptide encoded by the DNA polynucleotide.

39-41. (canceled)

42. (currently amended) A method of producing a ~~protein~~ polypeptide comprising:

culturing a cell into which has been introduced an expression vector according to claim 36, whereby said cell expresses the polypeptide encoded by the DNA segment; and

recovering the expressed ~~protein~~ polypeptide.

43. (withdrawn) An antibody that specifically binds to an epitope of a polypeptide according to claim 4.

44. (withdrawn) The antibody of claim 43 which is a monoclonal antibody.

45. (withdrawn) The antibody of claim 43 which is a single-chain antibody.

46. (withdrawn) The antibody of claim 43 operably linked to a reporter molecule.

47. (withdrawn) A method for detecting a genetic abnormality in a patient, comprising:

obtaining a genetic sample from a patient;

incubating the genetic sample with a polynucleotide comprising at least 14 contiguous nucleotides of SEQ ID NO:1 or the complement of SEQ ID NO:1, under conditions wherein said polynucleotide will hybridize to a complementary polynucleotide sequence, to produce a first reaction product; and

comparing said first reaction product to a control reaction product, wherein a difference between said first reaction product and said control reaction product is indicative of a genetic abnormality in the patient.

48. (canceled)

49. (withdrawn) A method of activating a cell-surface PDGF receptor, comprising exposing a cell comprising a cell-surface PDGF receptor to the polypeptide or protein of any of claims 1-31, whereby the polypeptide or protein binds to and activates the receptor.

50. (withdrawn) The method of claim 49 wherein the receptor is a PDGF alpha-receptor.

51. (withdrawn) The method of claim 49 wherein the receptor is a PDGF beta-receptor.

52. (withdrawn) A method of inhibiting a PDGF receptor mediated cellular process, comprising exposing a cell comprising a cell-surface PDGF receptor to a compound that inhibits binding of the polypeptide or protein of any of claims 1-31 to the receptor.

53. (withdrawn) A method of stimulating the growth of bone tissue, comprising applying to bone a growth-stimulating amount of the polypeptide or protein of any of claims 1-31.

54. (withdrawn) A method of modulating the proliferation, differentiation, migration, or metabolism of bone cells, comprising exposing bone cells to an effective amount of the polypeptide or protein of any of claims 1-31.

55. (new) The polynucleotide of claim 33 comprising nucleotides 736 through 1335 of SEQ ID NO:1.

56. (new) The polynucleotide of claim 32 wherein the polypeptide consists of residues 258-370 of SEQ ID NO:2, residues 250-370 of SEQ ID NO:2, or residues 246-370 of SEQ ID NO:2.

57. (new) The method of claim 42 wherein the polypeptide comprises amino acid residues 250-370 of SEQ ID NO:2.

58. (new) The method of claim 42 wherein the polypeptide comprises amino acid residues 246-370 of SEQ ID NO:2.

59. (new) The method of claim 42 wherein the polypeptide consists of residues 258-370 of SEQ ID NO:2, residues 250-370 of SEQ ID NO:2, or residues 246-370 of SEQ ID NO:2.